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IN THE CLAIMS

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A method for manufacturing a nanostructure ~~(150)~~ in-situ at at least one predetermined point ~~(A, B)~~ on a supporting carrier ~~(110)~~, ~~which the~~ method is characterized in that it comprises the following steps:

- choosing a suitable material for a substrate to be comprised in the carrier ~~(150)~~, and creating said substrate,

- preparing a template ~~(115)~~ on the substrate, wherein the template covers said predetermined point ~~(A, B)~~, and giving said template a proper shape according to the desired final shape of the nanostructure,

- causing a film ~~(140)~~ of nanosource material with desired thickness, width and length to be formed on the template ~~(115)~~, and

- causing at least part of the film ~~(140)~~ of nanosource material to restructure from a part of the template, thus forming the desired nanostructure ~~(150)~~ at the predetermined point ~~(150)~~,

said restructuring being in the form of a reassembling on the atomic scale of the nanosource material, resulting in qualitatively new properties relative to the properties of the nanosource material prior to the restructuring, said new properties being manifested in an altered, pre-defined response to external fields or forces.

2. (Currently Amended) The method of claim 1, ~~according to which~~ wherein the template ~~(115)~~ ~~comprises~~ includes a first ~~(120)~~ and a second ~~(130)~~ area, which have different properties with respect to their interaction with the nanosource material.

3. (Currently Amended) The method of claim 2, wherein the different properties of the two areas with respect to their interaction with the nanosource material is that one area ~~(120)~~ is given stronger adhesive properties than the other ~~(130)~~.

4. (Currently Amended) The method of claim 3, according to which the area (120) of the template that has the stronger adhesive properties with respect to the nanosource material covers the at least one predetermined point ~~(A, B)~~ on the substrate ~~(110)~~, thus bonding the nanostructure to the carrier at that point.
5. (Currently Amended) The method of ~~any of the previous claims, according to which~~claim 1, wherein the restructuring is carried out by providing additional energy to the film ~~(140)~~ of nanosource material.
6. (Currently Amended) The method of claim 5, ~~according to which~~wherein at least part of the additional energy is provided by ~~means of at least one of a~~ laser beam, ion beam ~~or and~~ electron beam which illuminates at least part of the film of nanosource material.
7. (Currently Amended) The method of ~~any of claims 1-4, according to which~~claim 1, wherein the restructuring is carried out by ~~means of~~ doping at least part of the material of the film of nanosource material.
8. (Currently Amended) The method of ~~any of claims 5, 6 or 7, according to which~~wherein the additional energy or doping is provided to a section of that part of the nanosource material which has been deposited on the area ~~(130)~~ of the template whose material has the weaker adhesive properties.
9. (Currently Amended) The method of ~~any of the previous claims, in which~~claim 1, wherein the restructuring of the nanosource material is in the form of exfoliation.
10. (Currently Amended) The method of ~~any of the previous claims, according to which~~claim 1, wherein the nanostructure which is formed is a nanotube ~~(150)~~ which connects two predetermined points ~~(A, B)~~ on the carrier ~~(110)~~.
11. (Currently Amended) The method according to ~~any of the previous claims, according to which~~claim 1, wherein at least one of the two ~~(120, 130)~~ areas of the template ~~(115)~~ is rectangular.

12. (Currently Amended) The method of ~~any of the previous claims, according to which~~claim 1, wherein the film (140) of nanosource material which is caused to be deposited on the template is a film of graphene.

13. (Currently Amended) A method for manufacturing an electronics device ~~(400)~~, said device comprising at least a carrier ~~(110)~~ and, arranged on the carrier, at least one component ~~(150)~~ for conducting electrical current between two predetermined points ~~(A, B)~~ on the carrier, said method comprising:

~~the steps of choosing a suitable material for a substrate to be comprised in the carrier, and creating the substrate, the method being characterized in that it comprises the following steps:~~

- arranging on the substrate at least one template area ~~(115)~~, so that the two predetermined points ~~(A, B)~~ on the carrier are in connection with a template area,
 - arranging a contact point ~~(120')~~ for external devices to at least one of the two predetermined points,
 - causing a film (140) of nanosource material with desired thickness, width and length to be deposited on at least one template area, and
 - causing at least one of said films of nanosource material to at least partially exfoliate from its template and to form a nanotube ~~(150)~~ which connects the two predetermined points on the carrier,
- wherein said component for conducting electrical current is formed by said nanotube (150).

14. (Currently Amended) The method of claim 13, ~~according to which~~wherein the at least one contact point ~~(120')~~ coincides with one of said two predetermined points ~~(A, B)~~.

15. (Currently Amended) The method of claim 13 ~~or 14, according to which~~wherein the contact point ~~(120')~~ is prepared before the nanosource material is caused to exfoliate from its template.

16. (Currently Amended) The method of claim 13 ~~or 14, according to which~~wherein the contact point ~~(120)~~ is prepared after the nanosource material is caused to exfoliate from its template.

17. (Currently Amended) The method of ~~any of claims 13-16, according to which~~wherein ~~the~~ at least one of the templates comprises two areas ~~(120, 130)~~ which have different properties with respect to their interaction with the nanosource material.

18. (Currently Amended) The method of claim 17, ~~in which~~wherein the different properties of the areas with respect to their interaction with the nanosource material are brought about by letting one area ~~(120, 120')~~ have stronger adhesive properties than the other ~~(130)~~ with respect to the nanosource material.

19. (Currently Amended) The method of ~~any of claims 13-18, according to which~~wherein a plurality of template areas are prepared on the substrate, said template areas being arranged so that a nanotube which is formed by a film of nanotube structure material formed on and subsequently exfoliated from one of these templates will interconnect with another nanotube which in a similar manner is exfoliated from a neighbouring template, thus forming one single continuous nanotube.

20. (Currently Amended) The method of ~~any of claims 13-19, according to which~~wherein at least one template areas ~~(120, 120')~~ that has/have the stronger adhesive properties with respect to the nanosource material ~~(140)~~ connects the two predetermined points ~~(A, B)~~ on the substrate.

21. (Currently Amended) The method of any of claims 13-20, ~~according to which~~wherein the exfoliation is carried out by providing additional energy to the film of nanosource material.

22. (Currently Amended) The method of claim 21, ~~according to which~~wherein at least part of the additional energy is provided by ~~means of~~ at least one of a laser

beam, ion beam ~~or~~ and electron beam,, which illuminates at least part of the film of nanosource material.

23. (Currently Amended) The method of ~~any of claims 13-20, according to which~~wherein the exfoliation is done by ~~means of~~ doping at least part of the material of the film of nanosource material.

24. (Currently Amended) The method of ~~any of claims 21, 22 or 23, according to which~~wherein the additional energy ~~or doping~~ is provided to a section of that part of the nanosource material which has been deposited on the area of the template which has the weaker adhesive properties.

25. (Currently Amended) The method of ~~any of claims 13-24, according to which~~wherein the films of nanotube source materials which are deposited on at least one of the templates is a film which will form a nanotube with different electrical properties compared to the electrical properties of a nanotube which will be formed by a film which is deposited on at least one of the other templates, thus giving the resulting total nanotube device semiconductor properties.

26. (Currently Amended) The method of ~~any of claims 13-25, according to which~~wherein the film of nanosource material which is caused to be deposited on the templates is a film of graphene.

27. (Currently Amended) The method of claim 26, ~~according to which~~wherein the tubes are given different electrical properties by virtue of the tubes having different chirality.

28 (Currently Amended) The method according to ~~any of claims 13-27, according to which~~wherein at least one of the two areas of the template is rectangular.

29. (Currently Amended) A nanostructure device ~~(200)~~, comprising:
-a carrier ~~(110)~~; and

a nanostructure ~~(150)~~ positioned on said carrier, said nanostructure extending along a predetermined path ~~(A, B)~~ on the carrier; ~~characterized in that the device additionally comprises~~

an aligning structure, which aligns the nanostructure along said predetermined path on the carrier ~~(110)~~; ~~the device (200) additionally comprising;~~
and

-a layer ~~(120)~~ of material positioned on the carrier, said material being a bonding material for attaching the nanostructure to the carrier, with the structure of the bonding material also serving as the aligning structure for the nanostructure.

30. ~~(Currently Amended)~~ Currently Amended The device of claim 29, in ~~which~~ wherein the nanostructure is a nanotube.

31. ~~(Currently Amended)~~ The device of ~~any of~~ claims 29-30, in ~~which~~ wherein the source material for the nanostructure is graphene.

32. ~~(Currently Amended)~~ An electronics device, ~~(400)~~, ~~said device comprising;~~

-at least a carrier ~~(110)~~;

~~and, arranged on the carrier, at least one component, arranged on the carrier, (150) for conducting electrical current between two predetermined points (A, B) on the carrier, said device being characterized in that it comprises, wherein a nanotube (150) as the at least one component for conducting electrical current between the two predetermined points~~ includes a nanotube, wherein the nanotube consists of at least two different sections with respect to the longitudinal extension of the nanotube, said two sections having different properties for conducting electrical current; ~~with the device additionally comprising; and~~

-an aligning structure for aligning said two sections of the a nanotube between said two points ~~(A, B)~~ on the carrier ~~(110)~~.

33. ~~(Currently Amended)~~ The device ~~(400)~~ according to claim 32, additionally comprising a layer ~~(120)~~ of material positioned on the carrier, said material being a bonding material for attaching the nanotube to the carrier.

34. (Currently Amended) The device of claim 33, ~~according to which~~wherein the bonding material also serves as the aligning structure of the nanotube.

35. (Currently Amended) The device of ~~any of claims 32-34, in which~~wherein the material of the nanotube is graphene.

36. (New) The method of claim 6, wherein the additional energy or doping is provided to a section of that part of the nanosource material which has been deposited on the area of the template whose material has the weaker adhesive properties.

37. (New) The method of claim 7, wherein the additional energy or doping is provided to a section of that part of the nanosource material which has been deposited on the area of the template whose material has the weaker adhesive properties.

38. (New) The method of claim 14, wherein the contact point is prepared before the nanosource material is caused to exfoliate from its template.

39. (New) The method of claim 14, wherein the contact point is prepared after the nanosource material is caused to exfoliate from its template.

40. (New) The method of claim 22, wherein the additional energy is provided to a section of that part of the nanosource material which has been deposited on the area of the template which has the weaker adhesive properties.

41. (New) The method of claim 23, wherein the additional energy or doping is provided to a section of that part of the nanosource material which has been deposited on the area of the template which has the weaker adhesive properties.

42. (New) The device of claim 30, wherein the source material for the nanostructure is graphene.

43. (New) The device of claim 33, wherein the material of the nanotube is graphene.

44. (New) The device of claim 34, wherein the material of the nanotube is graphene.